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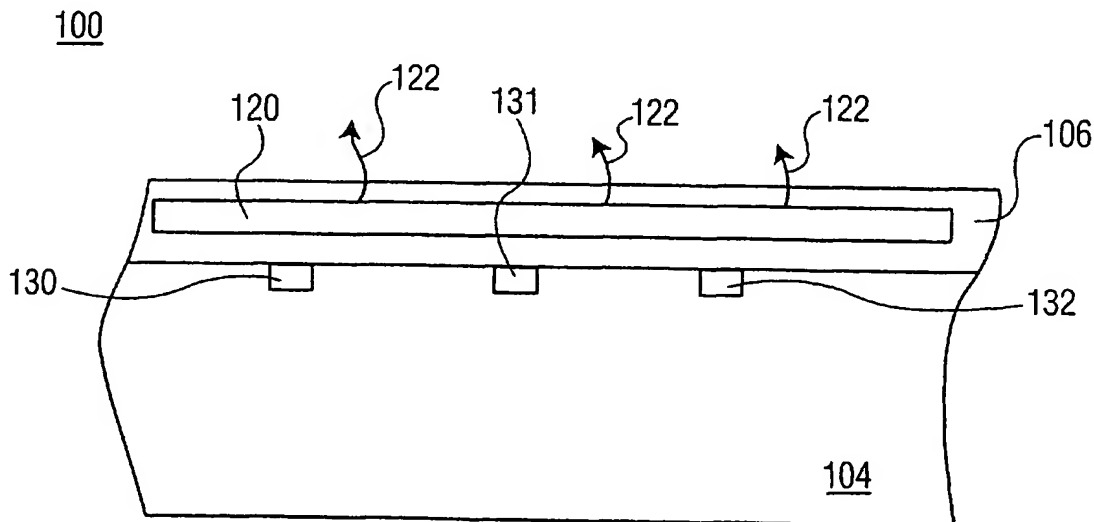
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- (81) **Designated States (national):** AE, AG, AL, AM, AT, AU,
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CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE,
GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR,
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MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT,
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GN, GQ, GW, ML, MR, NE, SN, TD, TG).
- Declaration under Rule 4.17:**
- as to applicant's entitlement to apply for and be granted
a patent (Rule 4.17(ii)) for the following designations AE,
AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES,
FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG,
MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT,
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[Continued on next page]

(54) Title: TAMPER-RESISTING PACKAGING



(57) Abstract: A tamper-resistant packaging approach protects non-volatile memory. According to an example embodiment of the present invention, an array of magnetic memory elements (130-132) in an integrated circuit (100) are protected from magnetic flux (122) by a package (106) including a magnet (120). Flux from the magnet is directed away from the magnetic memory elements by the package. When tampered with, such as by removal of a portion of the package for accessing the magnetic memory elements, the package allows the flux to reach some or all of the magnetic memory elements, which causes a change in a logic state thereof. With this approach, the magnetic memory elements are protected from tampering.



TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 G11C11/16 G11C8/20 G11C7/24 G06K19/073

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G11C G06K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	PATENT ABSTRACTS OF JAPAN vol. 008, no. 278 (P-322), 19 December 1984 (1984-12-19) & JP 59 144094 A (HITACHI SEISAKUSHO KK), 17 August 1984 (1984-08-17) abstract	1-11, 15-17, 20-22
A	-----	13, 18, 19
Y	US 2001/033012 A1 (KOEMLERLING OLIVER ET AL) 25 October 2001 (2001-10-25) paragraph '0097! - paragraph '0117! paragraph '0218! - paragraph '0219!	1-11, 15-17, 20-22
A	US 5 479 097 A (CHEATHAM ET AL) 26 December 1995 (1995-12-26) the whole document -----	10, 11, 16, 17, 20

☐ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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E earlier document but published on or after the international filing date

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O document referring to an oral disclosure, use, exhibition or other means

P document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

Z document member of the same patent family

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